

ABSTRACT OF THE DISCLOSURE

A phototransistor structure is disclosed. A sidewall is grown on the collector side and under the base. The surface of the sidewall is formed with a sidewall contact. When the contact is connected to an external voltage, the holes accumulated at the junction of the base and emitter can be quickly removed. This solves the problem in the prior art that using a bias between the base and the emitter to remove holes usually results in a large dark current (bias current), power consumption, and diminishing optoelectronic conversion gain.